

acidified food composition, the formulation is amenable to almost all manufacturing and packaging processes known in the art, unlike low acid products, which are limited to only those manufacturing/production processes which involve high heat sterilization, control of water activity and pasteurized process cheese products, which require application of hurdle processing.

[0064] In general, according to a preferred procedure, the compositions of the present invention are manufactured by mixing, in hot water (about 68° C. or 155° F.), all of the selected fats, colorants, acidulents, emulsifiers and flavorings under high shear in a high shear mixer. This portion ("the homogenized base") is then homogenized, in two stages, at 2500/500 psi in a high-pressure dairy homogenizer. It is then cooled through a plate heat exchanger to about 10° C. (50° F.) and removed to a storage vessel. The selected thickeners and any desired particulate ingredients, such as vegetable matter, fruit or meats, are then suspended in cold water (about 10° C. or 50° F.) in the high shear mixer. The cold water suspension is then pumped into the cooled homogenized base.

[0065] It will be apparent to those of ordinary skill in the art that the above-described mixing process is not limited to a two-stage process. The final mixture could be created in a single stage mix, with or without homogenization, as is sometimes practiced in the food industry. The mixture formed by the addition of the cold water suspension to the homogenized base is then evaluated to ensure that it has the desired pH and TTA, before being further processed in such a way as to create a shelf stable product that requires no refrigeration.

[0066] If necessary or desired, the finished composition could be subjected to a thermal or other processes known in the art to eliminate the potential for flingal spoilage. Such processes include pasteurization, irradiation, high-pressure or high temperature sterilization, micro-wave processing and ohmic heating.

[0067] Packaging processes for the compositions described herein could include a high acid aseptic process technique, where the cooling of the product occurs in a process cooler, and the product is subsequently introduced into sterilized packages and sealed in a sterile zone; a hot fill process, where the product is heated to such a temperature as to kill yeasts, mold spores, and vegetative bacterial cells, the package is filled with a hot product, and the heat of the product kills unwanted pathogens in both the product and non-pre-sterilized packages; or a retort process, wherein the product is filled and sealed into packages at a relatively low temperature, after which it is heated in a pressurized retort vessel to a temperature sufficient to kill pathogenic microorganisms, and subsequently cooled. Any of these processes, when used in the manufacture of a composition of the present invention, will result in a commercially sterile finished product suitable for consumer consumption and which will remain shelf stable at room temperature.

[0068] The invention is further illustrated by the following specific, non-limiting examples.

EXAMPLE 1

[0069] An imitation cheese loaf was prepared in a single stage process as follows, using the following ingredients:

No.	Ingredient	Percent (by weight)
1	Water	70.61
2	DATEM	0.3
3	Coconut oil	20.0
4	Enzyme modified cheddar cheese flavoring	1.1
5	Salt	1.2
6	Kappa carrageenan	0.2
7	Cellulose gel	1.0
8	Titanium dioxide	0.1
9	Annatto powder (15%)	0.04
10	Maltodextrin	1.5
11	Cultured dextrose	0.1
12	Glucono-8-lactone	0.36
13	Agar	2.5
14	Pectin	1.0

[0070] The entire amount of water was heated to 82° C. (180° F.) and placed in a high shear mixer. DATEM (ingredient no. 2) was added to the water and mixed under high agitation until blended. The coconut oil was added, and the entire mixture was sheared so as to melt the oil into the water-DATEM mixture. Ingredient nos. 5, 10, 9, 8, and 4 were added and the entire mixture was agitated until blended. Under high shear, the hydrocolloids (ingredient nos. 6, 7, 13, and 14) were added. Finally, the acidulents (ingredient nos. 11 and 12) were added and blended throughout.

[0071] The entire mixture was held at 68° C. (155° F.) until the hydrocolloids became fully hydrated and no longer lumpy. The entire mixture was pumped into a high pressure homogenizer, and homogenization was carried out at 2000 psi in a single stage. The product was then packed into rectangular loaf-shaped containers, and cooled to form a gelled cheese like mass having a solid, sliceable consistency.

[0072] The pH of the resulting product was about 4.3, moisture was present in an amount of 70% by weight of the composition, and the composition possessed textural characteristics such that the fracturability of the composition was 7.1 N.

[0073] In summary, the imitation cheese composition has several important advantages over the prior art. Its high acidity inhibits undesirable bacterial growth and makes it shelf stable without the need for thermal sterilization or adherence to hurdle predictive models. The imitation cheese composition tastes better than other imitation cheese compositions due to this small amount of acid and can provide a taste that was only previously achievable with a pasturized process cheese product. The imitation cheese composition also is relatively inexpensive to manufacture because of the high moisture and low protein content.

[0074] It will be appreciated to those of ordinary skill in the art that changes could be made to the embodiments described above without departing from the broad inventive concepts thereof. It is understood, therefore, that this invention is not limited to the particular embodiments disclosed, but is intended to cover modifications within the spirit and scope of the present invention as defined by the appended claims.